



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 59

[EPA-HQ-OAR-2006-0971; FRL-9644-8]

RIN 2060-AR37

**National Volatile Organic Compound Emission Standards for
Aerosol Coatings - Addition of Dimethyl Carbonate,
Benzotrifluoride, and Hexamethyldisiloxane to Table of
Reactivity Factors**

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: The EPA is taking direct final action to amend the National Volatile Organic Compound Emission Standards for Aerosol Coatings final rule, which is a rule that establishes national reactivity-based emission standards for the aerosol coatings category (aerosol spray paints) under the Clean Air Act, published elsewhere in the Federal Register. This direct final action adds three compounds: dimethyl carbonate, benzotrifluoride and hexamethyldisiloxane, and their associated reactivity factors to the aerosol coatings reactivity rule's table of reactivity factors based on petitions received from regulated entities. This action also revises two tables in the final rule, and corrects a typographical error in a test method reference.

DATES: This rule is effective on [INSERT DATE 90 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER] without further notice, unless the EPA receives adverse comment by [INSERT DATE 45 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER]. If the EPA receives adverse comment, we will publish a timely withdrawal in the Federal Register informing the public that some or all of the amendments in the final rule will not take effect.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2006-0971, by one of the following methods:

- <http://www.regulations.gov>: Follow the on-line instructions for submitting comments.
- Email: a-and-r-docket@epa.gov.
- Fax: (202) 566-9744.
- Mail: U.S. Postal Service, send comment to: EPA Docket Center (6102T), Air and Radiation Docket, National Volatile Organic Compound Emission Standards for Aerosol Coatings, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Please include a total of two copies.
- Hand Delivery: In person or by courier, deliver comments to: EPA Docket Center (6102T), Air and Radiation Docket, National Volatile Organic Compound Emission Standards for Aerosol Coatings, Public Reading Room, EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC 20460. Such

deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA-HQ-OAR-2006-0971. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be confidential business information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or email. The www.regulations.gov website is an "anonymous access" system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through www.regulations.gov, your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification,

the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

FOR FURTHER INFORMATION CONTACT: For information concerning the aerosol coatings reactivity rule, contact Ms. J. Kaye Whitfield, U.S. EPA, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Minerals and Manufacturing Group (D243-02), Research Triangle Park, North Carolina 27711, telephone number: (919)541-2509, fax number (919)541-5450, email address: whitfield.kaye@epa.gov. For information concerning the Clean Air Act section 183(e) consumer and commercial products program, contact Ms. Kim Teal, U.S. EPA, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Minerals and Manufacturing Group (D243-04), Research Triangle Park, North Carolina 27711, telephone number: (919)541-5580, fax number (919)541-5450, email address: teal.kim@epa.gov.

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I. Why is the EPA using a direct final rule?

The EPA is publishing this direct final rule without a prior proposed rule because we view this as a noncontroversial action and anticipate no adverse comment. Section 59.511(j) of the final rule states that if a regulated entity identifies a VOC that is needed for an aerosol formulation that is not listed in Tables 2A, 2B, or 2C, it is assigned a default reactivity factor (RF) of 22.04 g O₃/g VOC. However, regulated entities may petition the Agency to add a compound to Table 2A, 2B, or 2C provided that the petitions include the chemical name, CAS number, a statement certifying the intent to use the compound in an aerosol coatings product, and adequate information to evaluate the reactivity of the compound and assign a RF value consistent with the values for the other compounds listed in

Table 2A. Since publication of the final rule (73 FR 15604, March 24, 2008), compounds have been added to Table 2A following the same procedure (74 FR 29595, June 23, 2009). The amendments to the aerosol coatings final rule described herein consist of adding three compounds to Table 2A, and their associated RFs and Chemical Abstract Service (CAS) numbers, based on petitions received by the Agency and consistent with Section 59.511(j) of the final rule. The amendments do not make material changes to the rule. This action also revises Table 1 of the final rule by moving the units from the table heading to the reactivity limits column, revises Tables 2A, 2B, and 2C by assigning units to the reactivity factor column, and corrects a typographical error in a test method reference. However, in the "Proposed Rules" section of this Federal Register, we are publishing a separate document that will serve as the proposed rule to the National Volatile Organic Compound Emission Standards for Aerosol Coatings (40 CFR Part 59) if adverse comments are received on this direct final rule. We will not institute a second comment period on this action. Any parties interested in commenting must do so at this time. For further information about commenting on this rule, see the **ADDRESSES** section of this document.

If the EPA receives adverse comment, we will publish a timely withdrawal in the Federal Register informing the public that some or all of the amendments in this direct final rule

will not take effect. We would address all public comments in any subsequent final rule based on the proposed rule.

II. Does this action apply to me?

The entities potentially affected by this direct final rule are the same entities that are subject to the aerosol coatings final rule. The entities affected by the aerosol coatings final rule include: manufacturers, processors, distributors or importers of aerosol coatings for sale or distribution in the United States, and manufacturers, processors, distributors or importers who supply the entities listed above with aerosol coatings for sale or distribution in interstate commerce in the United States.

III. What should I consider as I prepare my comments for the EPA?

A. Submitting CBI. Do not submit this information to the EPA through www.regulations.gov or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to the EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public

docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

B. Tips for Preparing Your Comments. When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, Federal Register date and page number).
- Follow directions - The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.
- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

- Make sure to submit your comments by the comment period deadline identified.

IV. What are the amendments made by this direct final rule?

This direct final rule adds three compounds to Table 2A - Reactivity Factors: dimethyl carbonate, benzotrifluoride, hexamethyldisiloxane, and their corresponding CAS numbers and RFs (see Table A). This action is in accordance with Section 59.511(j) of the final rule which allows regulated entities to petition the Agency to add compounds to Table 2A, 2B, or 2C provided that the petition includes the chemical name, CAS number, a statement certifying the intent to use the compound in an aerosol coatings product, and adequate information to evaluate the reactivity of the compound and assign a RF value consistent with the values for the other compounds listed in Table 2A (73 FR 15604, March 24, 2008; 74 FR 29595, June 23, 2009). EPA received petitions from KOWA America, Raymond Regulatory Resources, Seymour of Sycamore, and 3M, requesting the addition of the three compounds to Table 2A.

This action also revises Table 1 of the final rule by moving the units, expressed as grams of ozone per gram of product (g O₃/g product), from the table heading to the column titled, "Reactivity Limit"; revises Tables 2A, 2B, and 2C by adding units, expressed as grams of ozone per gram of VOC (g O₃/g VOC), to the column titled, "Reactivity Factors"; and corrects a

test method typographical error by replacing the phrase

"California Air Resources Board Method 3-0" in 40 CFR

59.515(a)(1) with "California Air Resources Board Method 310."

TABLE A - Compounds Added to Table of Reactivity Factors

Compound	CAS No.	Reactivity Factor (g O ₃ /g VOC)
Benzotrifluoride	98-08-8	0.26
Hexamethyldisiloxane	107-46-0	0.00
Dimethyl carbonate	616-38-6	0.06

As is the case for the other compounds in Table 2A, the RFs assigned to the three compounds are consistent with the maximum incremental reactivity (MIR) values in California's aerosol coatings regulation (Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.6, Article 1, §94700).

In the instance of benzotrifluoride and dimethyl carbonate, their RFs were previously published in the EPA's original proposal for this rule; therefore, the information on their reactivity had been adequately evaluated and RFs assigned (72 FR 38592, July 16, 2007). When the rule was finalized, only those compounds known to EPA to be used in aerosol coating formulations were included in Table 2A (73 FR 15604, March 24, 2008). At the time the original rule was finalized, EPA did not know of any aerosol coating formulations in which benzotrifluoride and dimethyl carbonate were used, so their RFs were not included in Table 2A. The RFs for benzotrifluoride and

dimethyl carbonate are consistent with the California MIR values that have been effective since July 18, 2001.

For hexamethyldisiloxane, an RF value was not included in the original proposal for this rule. California assigned an MIR value of zero to hexamethyldisiloxane, effective October 2, 2010. The most recent MIR values published by Dr. William Carter at the University of California at Riverside, upon which the California MIR values are based, lists the MIR for hexamethyldisiloxane as -0.025 g O₃/g VOC (see <http://www.cert.ucr.edu/~carter/SAPRC/scales07.xls>). This MIR value indicates that hexamethyldisiloxane acts as a slight inhibitor to ozone formation. Based on this information, the EPA believes that a RF of zero is appropriate for the purposes of this regulation.

Comments on this direct final action are to be limited to issues directly associated with adding these three compounds, and their associated RFs to Table 2A.

V. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a "significant regulatory action" under the terms of Executive Order 12866 (58 FR 51735 October 4, 1993)

and is, therefore, not subject to review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act

This action does not impose any new information collection burden because it serves to add compounds to Table 2A of the rule and make several clarifying edits. However, the Office of Management and Budget (OMB) has previously approved the information collection requirements contained in the existing regulations (40 CFR parts 51 and 59) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. and has assigned OMB control number 2060-0617. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this final rule on small entities, small entity is defined as: (1) a small business as defined by the Small Business Administration's regulations at

13 CFR 121.201; (2) a governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. In determining whether a rule has a significant economic impact on a substantial number of small entities, the impact of concern is any significant adverse economic impact on small entities, since the primary purpose of the regulatory flexibility analyses is to identify and address regulatory alternatives "which minimize any significant economic impact of the rule on small entities." 5 USC 603 and 604. Thus, an agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, or otherwise has a positive economic effect on all of the small entities subject to the rule.

This rule will not impose any requirements on small entities. We have determined that small businesses will not incur any adverse impacts because the EPA is taking this action to amend the aerosol coatings rule by adding compounds to Table

2A of the rule and making several clarifying edits. These amendments do not create any new requirements or burdens, and no costs are associated with these amendments.

We have, therefore, concluded that this final rule will relieve regulatory burden for all affected small entities.

D. Unfunded Mandates Reform Act

This rule does not contain a federal mandate that may result in expenditures of \$100 million or more for state, local and tribal governments, in the aggregate, or the private sector in any one year. Thus, this rule is not subject to the requirements of sections 202 or 205 of UMRA.

This rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. In this action, the EPA is amending Table 2A by adding three compounds and their associated reactivity factors, and making several clarifying edits.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This action adds compounds and corresponding Chemical

Abstract Service numbers and reactivity factors to Table 2A of the aerosol coatings rule, and makes several clarifying edits. Thus, Executive Order 13132 does not apply to this action.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). This action adds compounds and corresponding Chemical Abstract Service numbers and reactivity factors to Table 2A of the aerosol coatings rule, and makes several clarifying edits. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying to those regulatory actions that concern health or safety risks, such that the analysis required under section 5-501 of the Order has the potential to influence the regulation. This action is not subject to Executive Order 13045 because it is based solely on technology performance.

H. Executive Order 13211: Actions that Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law No. 104-113, 12(d) (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs the EPA to provide Congress, through OMB, explanations when the agency decides not to use available and applicable voluntary consensus standards.

This action does not involve technical standards. Therefore, the EPA did not consider the use of any voluntary consensus standards.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest

extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

The EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided to human health or the environment. Further, this action adds compounds to Table 2 of the aerosol coatings rule, and corresponding Chemical Abstract Service numbers and reactivity factors, and makes several clarifying edits.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United

States prior to publication of the rule in the Federal Register.
A Major rule cannot take effect until 60 days after it is
published in the Federal Register. This action is not a "major
rule" as defined by 5 U.S.C. 804(2). This rule will be effective
[INSERT DATE 90 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL
REGISTER].

List of Subjects in 40 CFR Part 59

Environmental protection, Administrative practice and procedure, Air pollution control, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: March 1, 2012.

Lisa P. Jackson,
Administrator.

For the reasons set out in the preamble, part 59 of title 40, Chapter I of the Code of Federal Regulations is amended as follows:

Part 59- [AMENDED]

1. The authority citation for part 59 continues to read as follows:

Authority: 42 U.S.C 7414 and 7511b(e).

2. Section 59.515 is amended by revising paragraph (a)(1) to read as follows:

§ 59.515 Incorporations by reference.

* * * * *

(a) * * *

(1) California Air Resources Board Method 310 – Determination of Volatile Organic Compounds (VOC) in Consumer Products and Reactive Organic Compounds in Aerosol Coating Products (May 5, 2005), IBR approved for § 59.508.

* * * * *

3. Table 1 to Subpart E of Part 59 is revised to read as follows:

TABLE 1 to Subpart E of Part 59 - Product-Weighted Reactivity Limits by Coating Category

Coating Category	Category Code ^a	Reactivity Limit (g O ₃ /g product)
Clear Coatings	CCP	1.50

Flat Coatings	FCP	1.20
Fluorescent Coatings	FLP	1.75
Metallic Coatings	MCP	1.90
Non-Flat Coatings	NFP	1.40
Primers	PCP	1.20
Ground Traffic/Marking	GTM	1.20
Art Fixatives or Sealants	AFS	1.80
Auto body primers	ABP	1.55
Automotive Bumper and Trim Products	ABT	1.75
Aviation or Marine Primers	AMP	2.00
Aviation Propellor Coatings	APC	2.50
Corrosion Resistant Brass, Bronze, or Copper Coatings	CRB	1.80
Exact Match Finish - Engine Enamel	EEE	1.70
Exact Match Finish - Automotive	EFA	1.50
Exact Match Finish - Industrial	EFI	2.05
Floral Sprays	FSP	1.70
Glass Coatings	GCP	1.40
High Temperature Coatings	HTC	1.85
Hobby/Model/Craft Coatings, Enamel	HME	1.45
Hobby/Model/Craft Coatings, Lacquer	HML	2.70
Hobby/Model/Craft Coatings, Clear or Metallic	HMC	1.60
Marine Spar Varnishes	MSV	0.90
Photograph Coatings	PHC	1.00
Pleasure Craft Primers, Surfacer or Undercoaters	PCS	1.05
Pleasure Craft Topcoats	PCT	0.60
Polyolefin Adhesion Promoters	PAP	2.50
Shellac Sealers, Clear	SSC	1.00
Shellac Sealers, Pigmented	SSP	0.95
Slip-Resistant Coatings	SRC	2.45
Spatte/Multicolor Coatings	SMC	1.05
Vinyl/Fabric/Leather/Polycarbonate Coatings	VFL	1.55
Webbing/Veiling Coatings	WFC	0.85
Weld-Through Primers	WTP	1.00
Wood Stains	WSP	1.40
Wood Touch-up/Repair or Restoration Coatings	WTR	1.50

^aRegulated entities may use these category codes or define their own in accordance with §59.511(b)(6).

4. Table 2A to Subpart E of Part 59 is revised to read as follows:

TABLE 2A to Subpart E of Part 59 - Reactivity Factors

Compound	CAS No.	Reactivity Factor (g O ₃ /g VOC)
Formaldehyde	50-00-0	8.97
Glycerol (1,2,3-Propanetriol)	56-81-5	3.27
Propylene Glycol	57-55-6	2.75
Ethanol	64-17-5	1.69
Formic Acid	64-18-6	0.08
Acetic Acid	64-19-7	0.71
Methanol	67-56-1	0.71
Isopropyl Alcohol (2-Propanol)	67-63-0	0.71
Acetone (Propanone)	67-64-1	0.43
n-Propanol (n-Propyl Alcohol)	71-23-8	2.74
n-Butyl Alcohol (Butanol)	71-36-3	3.34
n-Pentanol (Amyl Alcohol)	71-41-0	3.35
Benzene	71-43-2	0.81
1,1,1-Trichloroethane	71-55-6	0.00
Propane	74-98-6	0.56
Vinyl Chloride	75-01-4	2.92
Acetaldehyde	75-07-0	6.84
Methylene Chloride (Dichloromethane)	75-09-2	0.07
Ethylene Oxide	75-21-8	0.05
Isobutane	75-28-5	1.35
HFC-152A (1,1-Difluoroethane)	75-37-6	0.00
Propylene Oxide	75-56-9	0.32
t-Butyl Alcohol	75-65-0	0.45
Methyl t-Butyl Ketone	75-97-8	0.78
Isophorone (3,5,5-Trimethyl-2-Cyclohexenone)	78-59-1	10.58
Isopentane	78-78-4	1.68
Isobutanol	78-83-1	2.24
2-Butanol (s-Butyl Alcohol)	78-92-2	1.60

Methyl Ethyl Ketone (2-Butanone)	78-93-3	1.49
Monoisopropanol Amine (1-Amino-2-Propanol)	78-96-6	13.42
Trichloroethylene	79-01-6	0.60
Propionic Acid	79-09-4	1.16
Acrylic Acid	79-10-7	11.66
Methyl Acetate	79-20-9	0.07
Nitroethane	79-24-3	12.79
Methacrylic Acid	79-41-4	18.78
a-Pinene (Pine Oil)	80-56-8	4.29
Methyl Methacrylate	80-62-6	15.84
Naphthalene	91-20-3	3.26
Xylene, ortho-	95-47-6	7.49
o-Cresol	95-48-7	2.34
1,2,4-Trimethylbenzene	95-63-6	7.18
3-Pentanone	96-22-0	1.45
Methyl Ethyl Ketoxime (Ethyl Methyl Ketone Oxime)	96-29-7	22.04
gamma-Butyrolactone	96-48-0	1.15
Ethyl Lactate	97-64-3	2.71
Isobutyl Isobutyrate	97-85-8	0.61
Isobutyl Methacrylate	97-86-9	8.99
Butyl Methacrylate	97-88-1	9.09
Benzotrifluoride	98-08-8	0.26
PCBTF (p-Trifluoromethyl-Cl-Benzene)	98-56-6	0.11
Cumene (Isopropyl Benzene)	98-82-8	2.32
a-Methyl Styrene	98-83-9	1.72
Ethyl Benzene	100-41-4	2.79
Styrene	100-42-5	1.95
Benzaldehyde	100-52-7	0.00
Triethanolamine	102-71-6	2.76
2-Ethyl-Hexyl Acetate	103-09-3	0.79
2-Ethyl-Hexyl Acrylate	103-11-7	2.42
2-Ethyl-1-Hexanol (Ethyl Hexyl Alcohol)	104-76-7	2.20
Ethyl Propionate	105-37-3	0.79
s-Butyl Acetate	105-46-4	1.43
n-Propyl Propionate	106-36-5	0.93
Xylene, para-	106-42-3	4.25
p-Dichlorobenzene	106-46-7	0.20

Dimethyl Succinate	106-65-0	0.23
1,2-Epoxybutane (Ethyl Oxirane)	106-88-7	1.02
n-Propyl Bromide	106-94-5	0.35
Butane	106-97-8	1.33
1,3-Butadiene	106-99-0	13.58
Ethylene Glycol	107-21-1	3.36
2-Methyl-2,4-Pentanediol	107-41-5	1.04
Hexamethyldisiloxane	107-46-0	0.00
Isohexane Isomers	107-83-5	1.80
Methyl n-Propyl Ketone (2-Pentanone)	107-87-9	3.07
Propylene Glycol Monomethyl Ether (1-Methoxy-2-Propanol)	107-98-2	2.62
n,n-Dimethylethanolamine	108-01-0	4.76
1-Nitropropane	108-03-2	16.16
Vinyl Acetate	108-05-4	3.26
Methyl Isobutyl Ketone	108-10-1	4.31
Isopropyl Acetate	108-21-4	1.12
Propylene Carbonate (4-Methyl-1,3-Dioxolan-2-one)	108-32-7	0.25
Xylene, meta-	108-38-3	10.61
Propylene Glycol Monomethyl Ether Acetate (1-Methoxy-2-Propyl Acetate)	108-65-6	1.71
1,3,5-Trimethyl Benzene	108-67-8	11.22
Di-Isobutyl Ketone (2,6-Dimethyl-4-Heptanone)	108-83-8	2.94
Methylcyclohexane	108-87-2	1.99
Toluene	108-88-3	3.97
Monochlorobenzene	108-90-7	0.36
Cyclohexanol	108-93-0	2.25
Cyclohexanone	108-94-1	1.61
n-Butyl Butyrate	109-21-7	1.12
Propyl Acetate	109-60-4	0.87
Pentane	109-66-0	1.54
Ethylene Glycol Monomethyl Ether (2-Methoxyethanol)	109-86-4	2.98
Tetrahydrofuran	109-99-9	4.95
Methyl Isoamyl Ketone (5-Methyl-2-Hexanone)	110-12-3	2.10
Isobutyl Acetate	110-19-0	0.67
Methyl Amyl Ketone	110-43-0	2.80

Hexane	110-54-3	1.45
n-Propyl Formate	110-74-7	0.93
2-Ethoxyethanol	110-80-5	3.78
Cyclohexane	110-82-7	1.46
Morpholine	110-91-8	15.43
Dipropylene Glycol	110-98-5	2.48
Ethylene Glycol Monoethyl Ether Acetate (2-Ethoxyethyl Acetate)	111-15-9	1.90
Diethylenetriamine	111-40-0	13.03
Diethanolamine	111-42-2	4.05
Diethylene Glycol	111-46-6	3.55
n-Octane	111-65-9	1.11
2-Butoxy-1-Ethanol (Ethylene Glycol Monobutyl Ether)	111-76-2	2.90
Diethylene Glycol Methyl Ether (2- (2-Methoxyethoxy) Ethanol)	111-77-3	2.90
n-Nonane	111-84-2	0.95
2-(2-Ethoxyethoxy) Ethanol	111-90-0	3.19
Ethylene Glycol Monobutyl Ether Acetate (2-Butoxyethyl Acetate)	112-07-2	1.67
2-(2-Ethoxyethoxy) Ethyl Acetate	112-15-2	1.50
2-(2-Butoxyethoxy) -Ethanol	112-34-5	2.70
Dimethyl Ether	115-10-6	0.93
Triethylamine	121-44-8	16.60
2-Phenoxyethanol; Ethylene Glycol Phenyl Ether	122-99-6	3.61
Diacetone Alcohol	123-42-2	0.68
2,4-Pentanedione	123-54-6	1.02
Butanal	123-72-8	6.74
Butyl Acetate, n	123-86-4	0.89
2-(2-Butoxyethoxy) Ethyl Acetate	124-17-4	1.38
2-Amino-2-Methyl-1-Propanol	124-68-5	15.08
Perchloroethylene	127-18-4	0.04
Ethanolamine	141-43-5	5.97
Ethyl acetate	141-78-6	0.64
Heptane	142-82-5	1.28
n-Hexyl Acetate (Hexyl Acetate)	142-92-7	0.87
2-Ethyl Hexanoic Acid	149-57-5	4.41
1,2,3-Trimethyl Benzene	526-73-8	11.26
t-Butyl Acetate	540-88-5	0.20
Methyl Isobutyrate	547-63-7	0.70

Methyl Lactate	547-64-8	2.75
Methyl Propionate	554-12-1	0.71
1,2 Butanediol	584-03-2	2.21
n-Butyl Propionate	590-01-2	0.89
Methyl n-Butyl Ketone (2-Hexanone)	591-78-6	3.55
Dimethyl carbonate	616-38-6	0.06
Ethyl Isopropyl Ether	625-54-7	3.86
Dimethyl Adipate	627-93-0	1.95
Methy n-Butyl Ether	628-28-4	3.66
Amyl Acetate (Pentyl Ethanoate, Pentyl Acetate)	628-63-7	0.96
Ethyl n-Butyl Ether	628-81-9	3.86
Ethyl t-Butyl Ether	637-92-3	2.11
1,3-Dioxolane	646-06-0	5.47
Ethyl-3-Ethoxypropionate	763-69-9	3.61
Methyl Pyrrolidone (n-Methyl-2-Pyrrolidone)	872-50-4	2.56
Dimethyl Gluterate	1119-40-0	0.51
Ethylene Glycol 2-Ethylhexyl Ether [2-(2-Ethylhexyloxy) Ethanol]	1559-35-9	1.71
Propylene Glycol Monopropyl Ether (1-Propoxy-2-Propanol)	1569-01-3	2.86
Propylene Glycol Monoethyl Ether (1-Ethoxy-2-Propanol)	1569-02-4	3.25
2-Methoxy-1-Propanol	1589-47-5	3.01
Methyl t-Butyl Ether	1634-04-4	0.78
Ethylcyclohexane	1678-91-7	1.75
Isoamyl Isobutyrate	2050-01-3	0.89
2-Propoxyethanol (Ethylene Glycol Monopropyl Ether)	2807-30-9	3.52
n-Butoxy-2-Propanol	5131-66-8	2.70
d-Limonene (Dipentene or Orange Terpene)	5989-27-5	3.99
Dipropylene Glycol Methyl Ether Isomer (2-[2Methoxypropoxy]-1-Propanol)	13588-28-8	3.02
Texanol (1,3 Pentanediol, 2,2,4-Trimethyl, 1-Isobutyrate)	25265-77-4	0.89
Isodecyl Alcohol (8-Methyl-1-Nonanol)	25339-17-7	1.23
Tripropylene Glycol Monomethyl Ether	25498-49-1	1.90
Glycol Ether DPNB (1-(2-Butoxy-1-	29911-28-2	1.96

Methylethoxy) 2-Propanol)		
Propylene Glycol t-Butyl Ether (1-tert-Butoxy-2-Propanol)	57018-52-7	1.71
2-Methoxy-1-Propyl Acetate	70657-70-4	1.12
Oxo-Heptyl Acetate	90438-79-2	0.97
2-tert-Butoxy-1-Propanol	94023-15-1	1.81
Oxo-Octyl Acetate	108419-32-5	0.96
C8 Disubstituted Benzenes	na	7.48
C9 Styrenes	na	1.72

5. Table 2B to Subpart E of Part 59 is revised to read as follows:

Table 2B to Subpart E of Part 59 - Reactivity Factors for Aliphatic Hydrocarbon Solvent Mixtures

Bin	Average Boiling Point* (degrees F)	Criteria	Reactivity Factor (g O ₃ /g VOC)
1	80-205	Alkanes (< 2% Aromatics)	2.08
2	80-205	N- & Iso-Alkanes (≥ 90% and < 2% Aromatics)	1.59
3	80-205	Cyclo-Alkanes (≥ 90% and < 2% Aromatics)	2.52
4	80-205	Alkanes (2 to < 8% Aromatics)	2.24
5	80-205	Alkanes (8 to 22% Aromatics)	2.56
6	>205-340	Alkanes (< 2% Aromatics)	1.41
7	>205-340	N- & Iso-Alkanes (≥ 90% and < 2% Aromatics)	1.17
8	>205-340	Cyclo-Alkanes (≥ 90% and < 2% Aromatics)	1.65
9	>205-340	Alkanes (2 to < 8% Aromatics)	1.62
10	>205-340	Alkanes (8 to 22% Aromatics)	2.03
11	>340-460	Alkanes (< 2% Aromatics)	0.91

12	>340-460	N- & Iso-Alkanes (≥ 90% and < 2% Aromatics)	0.81
13	>340-460	Cyclo-Alkanes (≥ 90% and < 2% Aromatics)	1.01
14	>340-460	Alkanes (2 to < 8% Aromatics)	1.21
15	>340-460	Alkanes (8 to 22% Aromatics)	1.82
16	>460-580	Alkanes (< 2% Aromatics)	0.57
17	>460-580	N- & Iso-Alkanes (≥ 90% and < 2% Aromatics)	0.51
18	>460-580	Cyclo-Alkanes (≥ 90% and < 2% Aromatics)	0.63
19	>460-580	Alkanes (2 to < 8% Aromatics)	0.88
20	>460-580	Alkanes (8 to 22% Aromatics)	1.49

* Average Boiling Point = (Initial Boiling Point + Dry Point) /
2 (b) Aromatic Hydrocarbon Solvents

6. Table 2C to Subpart E of Part 59 is revised to read as follows:

**Table 2C to Subpart E of Part 59 - Reactivity Factors for
Aromatic Hydrocarbon Solvent Mixtures**

Bin	Boiling Range (degrees F)	Criteria	Reactivity Factor (g O ₃ /g VOC)
21	280-290	Aromatic Content (≥98%)	7.37
22	320-350	Aromatic Content (≥98%)	7.51
23	355-420	Aromatic Content (≥98%)	8.07
24	450-535	Aromatic Content (≥98%)	5.00

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